## REMARKS

Applicant first wishes to thank the Examiner for indicating that claims 16 and 18-20 contain allowable subject matter.

Claim 28 stands rejected as being anticipated by Rampone (U.S. Pat. No. 6,020,751). In response, Applicant has cancelled claim 28 without prejudice. Its former dependent claims, claims 30-32, have been amended to now depend from claim 29.

Claim 15 stands rejected as being obvious over Rampone in view of Onitsuka (U.S. Pat. No. 6,618,937). The rejection is erroneous, however, because neither reference teaches or suggests, alone or in combination, every limitation of claim 15.

Particularly, claim 15 is directed to a method of manufacturing a high-frequency assembly that includes a plurality of components. At least one of the components is frequency specific. Particularly, a placing apparatus of an automatic assembly apparatus places a plurality of components (e.g., electronic components) onto a high-frequency assembly. Prior to the placing apparatus gripping a frequency-specific component for placement on the assembly, the component is identified using a frequency-encoding feature on the component. If the identification indicates that the high-frequency component is the correct component for the assembly, the component is accepted for placement on the assembly. Otherwise, the component is rejected. *E.g., Spec.*, p. 6, ll. 7-23; p. 8, ll. 17-21.

The primary reference, Rampone has nothing to do with *manufacturing* high-frequency assemblies by placing identified, frequency-specific components on an assembly, as claimed in claim 15. In contrast, Rampone is directed to a method of *stress testing* a completed circuit board assembly to ensure proper operation. *E.g., Rampone*, col. 1, ll. 7-9; col. 2, ll. 19-39. Rampone discloses a processor that performs at least one parametric test designed to determine whether a given circuit board assembly has an adequate design margin to ensure proper performance. According to Rampone, the parametric testing is specifically directed

towards testing the integrity and interaction of all of the components and agents. *E.g.*, *Rampone*, col. 4, ln. 60 – col. 5, ln. 6.

Indeed, for the method of Rampone to even occur, the manufacturing process for the circuit board assembly is necessarily complete, with all electronic components already mounted to the circuit board under test. A reference that discloses a method of stress testing a completed circuit board (i.e., post-manufacture) teaches or suggests nothing about how those components are selected and mounted to circuit board as part of its manufacturing process.

Nevertheless, there are several glaring differences between claim 15 and the cited references. One difference is that neither reference teaches or suggests, "identifying a frequency-encoding feature on a frequency-specific component prior to gripping the frequency-specific component with the placing apparatus," as claimed. Rampone reads a standard operating frequency for the circuit board from read-only memory (ROM), or determines a clock speed for the circuit board by determining the setting of one or more jumpers settings on the circuit board. However, whatever Rampone reads is for the completed circuit board only and not for a particular component. Rampone reads for stress testing purposes only, and not to determine whether a given component should be mounted on the circuit board assembly. Further, nothing Rampone teaches occurs "prior to gripping the frequency-specific component with the placing apparatus."

Onitsuka discloses a method of manufacturing a circuit board, but says nothing about identifying a frequency-encoding feature on a frequency-specific component prior to gripping the frequency-specific component with the placing apparatus. In fact, Onituka is completely silent on the frequency-specific characteristics of the components. The Office Action alleges that Onitsuka teaches a camera to image the component and determine its frequency-specific characteristics. For support, the Office Action cites column 7 of Onitsuka, lines 25-43. However, the cited passage does not teach or suggest this limitation. The cited passage

discloses only that the camera images the component to determine its position for placement on the circuit board. It says nothing about the frequency characteristics of a given component. Further, according to Onitsuka, the camera images only a bottom surface of the component, or an edge of the circuit board, after being gripped for placement on the circuit board, not "prior to gripping the frequency-specific component with the placing apparatus," as claimed. Therefore, Onitsuka does not remedy Rampone.

Another difference is that neither reference teaches or suggests, "accepting the frequency-specific component for connection to the high-frequency assembly if the frequency-encoding feature indicates that the frequency-specific component is a correct component for the assembly...and...rejecting the frequency-specific component for connection to the high-frequency assembly if the frequency-encoding feature indicates that the frequency-specific component is not the correct component for the assembly." Indeed, neither reference can teach or suggest accepting or rejecting a frequency-specific component based on a frequency-encoding feature that neither reference identifies.

Additionally, however, the circuit board assembly in Rampone already has its requisite components mounted to the circuit board under test. Because Rampone is stress testing the integrity and interaction of the completed components, Rampone cannot not teach or suggest accepting and rejecting frequency-specific components for placement on a circuit board assembly. The secondary reference, Onitsuka, also fails to teach or suggest these limitations, and the Office Action does not allege that it does.

Therefore, for at least the foregoing reasons, neither Rampone nor Onitsuka alone teaches or suggests every limitation of claim 15. And since both references fails to teach or suggest the same limitations, any combination of the two references also fails to teach or suggest those limitations. Accordingly, neither Rampone nor Onitsuka renders claim 15 or its dependent claims obvious.

Claim 29 is directed to a manufacturing apparatus for the automatic manufacture of a high-frequency assembly, and stands rejected as being obvious over Rampone in view of Onitsuka for the same reasons as those stated for claim 15. However, claim 29 is the corresponding apparatus claim and recites, "a sensor to detect a frequency-encoded feature associated with the frequency-specific component that indicates an operating frequency of the frequency-specific component...[and]...a controller... configured to... receive a signal from the sensor responsive to the detection of the frequency-encoded feature...and...control [a] placing apparatus to place the frequency-specific component on the assembly, or to reject the frequency-specific component based on the received signal prior to the component being taken up by the placing apparatus." Thus, claim 29 contains language similar to that of claim 15. As such, claim 29 and its dependent claims are non-obvious over the cited references for reasons similar to those stated above with respect to claim 15.

Finally, dependent claims 27 and 32-33 stand rejected as being obvious over Rampone in view of Onitsuka and Miyauchi (U.S. Pat. No. 5,539,976). However, these claims depend directly or indirectly from respective independent claims that are non-obvious over the cited art. Therefore, these, too, are non-obvious over the cited references. Further, Miyauchi does not remedy either Rampone or Onitsuka.

In light of the foregoing amendments and remarks, all pending claims are in condition for allowance. Therefore, Applicant respectfully requests that the Examiner withdraw the rejections and issue a Notice of Allowance.

Respectfully submitted,

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